

What Is Claimed Is:

1. A cruise control system for motor vehicles, having a sensor device (10) for measuring the vehicle's operating parameters and for measuring the distance to an object located in front of the vehicle and having a controller (12) for controlling the vehicle's speed or acceleration as a function of the measured operating parameters and distance data, wherein the controller (12) has a stop-and-go function for automatically controlling driving off, rolling, and stopping as a function of the movements of the object, and is designed to continuously check the sensor device (10) during the stop-and-go operation for one or multiple predefined conditions which contradict a safe stop-and-go operation, and in the presence of such a condition, to initiate a procedure for the shutdown of the stop-and-go function.
2. The cruise control system as recited in Claim 1, wherein one of the checked conditions is a turn.
3. The cruise control system as recited in Claim 2, wherein the turn is detected when the turn radius (R) determined by the sensor device (10) is smaller than a predefined threshold value (R_{MAX}).
4. The cruise control system as recited in Claim 2, wherein the turn is detected when the turn radius (R) measured by the sensor device (10) is constantly smaller than a predefined threshold value (R_{MAX}) during a predefined time interval (T_1).
5. The cruise control system as recited in one of the preceding claims, wherein one of the checked conditions is represented by the fact that the instantaneous speed (V) of the vehicle measured by the sensor device (10) is essentially equal to an intended speed (V_{SET}) in effect for the stop-and-go function during a predefined time interval (T_2), and that no target object is detected during this time interval.
6. The cruise control system as recited in one of Claims 1 through 4,

wherein one of the checked conditions is represented by the fact that the instantaneous speed (V) of the vehicle measured by the sensor device (10) is lower than a limiting speed (V_2) permitted for the stop-and-go function during a predefined time interval (T_2), and that no target object is detected during this time interval.

7. The cruise control system as recited in one of the preceding claims, wherein the procedure for shutdown of the stop-and-go function includes the output of a request to the driver to take over control of the vehicle or, provided the conditions are met, to switch over to a regular cruise control mode and distance control mode (ACC).

8. The cruise control system as recited in Claim 7, wherein the request is represented by an acoustic signal.

9. The cruise control system as recited in one of the preceding claims, wherein the procedure for shutdown of the stop-and-go function includes automatically regulating the vehicle speed down to zero or to a low speed value.

10. The cruise control system as recited in Claim 7 or 8, and in Claim 9, wherein the speed is automatically regulated down after a certain waiting time subsequent to the output of the request has elapsed.